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EDUCATIONAL CONVENTION

FEB.1862

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PROCEEDINGS

OF THE

EDUCATIONAL CONVENTION,

HELD AT

OSWEGO, N. Y.,

FEBRUARY 11, 12, AND 13, 1862,

TO EXAMINE INTO A SYSTEM OF

PRIMARY INSTRUCTION BY OBJECT LESSONS.

REPORTED FOR AND PUBLISHED

UNDER THE DIRECTION OF THE BOARD OF EDUCATION OF OSWEGO.

NEW YORK:
HARPER & BROTHERS, PUBLISHERS,
FRANKLIN SQUARE.
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The Board of Education of the city of Oswego, New York, issued a circular in December, 1861, to the leading educators of the country, inviting them to an examination of the system of primary instruction which had been recently introduced into their public schools. In response to that invitation, an educational meeting convened at the Court-room in Oswego on Tuesday, Feb. 11, at 11 o'clock A.M.

The following gentlemen served on the Committee of Examination:

S. B. WOOLWORTH, LL.D., Sec'y Board of Regents, Albany, N. Y.
EMERSON W. KEYES, Deputy Sup't. Pub. Instruction, N. Y.
Hon. DAVID N. CAMP, State Sup't. Schools, Conn., and Principal of the State Normal School.
GEO. L. FARNHAM, Sup't. Schools, Syracuse, N. Y.
S. W. STARKWEATHER, Sup't. Schools, Rochester, N. Y.
HENRY B. WILBUR, M.D., Sup't. New York State Asylum for Idiots, Syracuse, N. Y.
Prof. D. H. COCHRAN, Prin. State Normal School, Albany, N. Y.
Prof. WM. F. PHELPS, Prin. State Normal School, Trenton, N. J.
W. D. HUNTLEY, Prin. Experimental Depart. State Normal School, Albany, N. Y.
Miss L. E. KETCHUM, Prin. of the Experimental Depart. State Normal School, Bloomington, Ill.
THOS. F. HARRISON, Prin. Greenwich Av. School, New York City.
W. NICOLL, School Commissioner, Suffolk Co., N. Y.
JAS. CRUIKSHANK, Editor New York Teacher, Albany, N. Y.
Dr. M'CLELLAN, Clerk of the Board of Education, Paterson, N. J.

EMERSON W. KEYES was chosen Chairman of the General Committee, and Prof. D. H. COCHRAN Secretary.

The following gentlemen were appointed as a special committee on the Report to be rendered at the close of the examination:

Prof. W. F. PHELPS, Trenton, N. J.
Prof. D. H. COCHRAN, Albany, N. Y.
Hon. DAVID N. CAMP, New Britain, Conn.
THOS. F. HARRISON, Esq., New York City.
H. B. WILBUR, M.D., Syracuse, N. Y.
W. NICOLL, Esq., Suffolk Co., L. I.
GEO. L. FARNHAM, Esq., Syracuse, N. Y.

OSWEGO EDUCATIONAL CONVENTION.

On calling the meeting to order, the Secretary of the Board of Education, E. A. Sheldon, Esq., addressed the Committee of Examination as follows:

Gentlemen,—It is perhaps due to you as well as ourselves to state more definitely the object for which we have invited you to come here from different and distant portions of the country; and, first, we desire distinctly and emphatically to say it is not to exhibit our schools.

For more than eight years we have been striving to improve them; and when we compare them with what they were eight years ago, at the time of their organization, we feel that decided progress has been made; but never have their deficiencies been so apparent as at the present moment. Whatever their improvement may have been, it certainly has not kept pace with our idea of what they ought to be.

We have rather asked you here to examine into a system of instruction which we have been endeavoring to incorporate into our schools, for the origin of which we claim no credit. We do not claim that the principles of this system are new in this country. For years they have been quietly and almost imperceptibly creeping into our educational theories, and in an isolated and disjointed may, one here and another there, they have made their way more or less into our best schools; and those schools which have been taught most fully in accordance with these principles, with scarcely a dissenting voice, we are wont to regard as our best schools. *Good teachers* every where are working more or less in accordance with some one or more of these principles, modified, perhaps, in some degree; and thus they have been preparing the way for the introduction of these principles, embodied into a *system of primary education* of which they constitute the very web and woof. It is this feature which we claim as new in this country. We have never had any system of primary education based on sound philosophical principles practically carried out in a definite and well-arranged cur-

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riculum. Whether such is the system to which we now call your attention we leave for you to judge, and it is for this purpose we have presumed to invite you here to-day. So much importance do we attach to the establishment of this system of primary instruction in our own country, that, should your judgment, after a careful investigation, accord with our own, formed from what we regard as a fair experiment of it in our schools, we are confident no one can but feel that the results will fully justify the call we have made upon your time and generosity.

In such an event, it can but lead to a complete revolution in our methods of teaching in this country, as also in the profession of teaching itself, or, rather, it will *make teaching a profession* —a title it has yet to earn.

Another and subordinate object we had in view was to convey to the educators of the country a clearer and more definite idea as to what this system, now popularly called Object Teaching, is. There is at present certainly a very vague and indefinite, not to say erroneous idea both of its principles and practice. We trust this meeting may result in throwing more light upon this subject, and, if approved, in adopting measures to remove obstacles now in the way of its progress, and inaugurating measures for its successful and permanent introduction into the schools of this country.

We desire not to occupy one moment of your time and attention that may better be devoted to investigation; but thus much it seemed to us desirable to say, and we now leave the examination in your hands, and you will pursue such a course for the accomplishment of the object of your visit as to you may seem best. To facilitate business, we have arranged a programme, which we thought might enable the Committee to accomplish the most in the shortest space of time. This you will adopt or reject, in part or in whole, as you deem best. We have endeavored to arrange it so as to show both results and methods. We hope the Committee will consider, however, that both children and teachers are yet but novices in these methods of giving and receiving instruction, and the same results must not be expected as a full course of training would present.

REPORT OF THE COMMITTEE.

THE Committee selected by the Board of Education of the city of Oswego to attend an examination of the primary schools of that city, held on the 11th, 12th, and 13th days of February, 1862, with special reference to an investigation of the system of "Object Teaching" recently introduced into said schools, and to an expression of opinion thereon, beg leave respectfully to

REPORT,

That the system in question is designed and claimed to be in accordance with those principles so prominently exemplified by the great Swiss educator, Henry Pestalozzi, who lived and labored during the last half of the eighteenth century. Of him the Hon. Henry Barnard justly remarks that, "Although his personal labors were confined to his native country, and their immediate influence was weakened by many defects of character, still, his general views of education were so sound and just that they are now adopted by teachers who never read a word of his life or writings, and by many who never even heard his name. They have become the common property of teachers and educators throughout the world."

These principles lie down deep in the nature of man. They recognize the great truth that this nature is threefold—material, intellectual, moral, and that it has its laws of growth and development. Pestalozzi believed, as we believe and know, that human beings possess affections and a moral sense as well as reason, and intelligence, and sensation.

NATURE OF EDUCATION.

He therefore assumed *faith and love* as the only true foundation of a system of education. He asserts that education, in order to fit man for his destination, must proceed according to natural laws; that it should not act as an arbitrary mediator between the child and nature—between man and God—but that it should assist the course of natural development instead of doing it violence; that it should watch and follow its progress, instead of attempting to mark out a path agreeably to some vague preconceived system. He sought to develop and strengthen the faculties of the child by a steady course of excitement to self-activity, with a limited degree of assistance to his efforts.

He aimed to discover the proper point for commencing the education of the young, and then to proceed in a slow and gradual, but progressive and unbroken course from one step to another, always waiting until the preceding steps should have a certain degree of distinctness in the mind of the child before entering upon the presentation of a new step.

DISTINCTIVE PRINCIPLES.

Pestalozzi believed *that education in its essence consists in the harmonious and uniform development of every faculty, so that the body should not be in advance of the mind nor the mind of the body, nor should the affections be neglected; and that promptitude and skill in action should, as far as possible, keep pace with the acquisition of knowledge.* He required close attention and special reference to the individual peculiarities of each child and of each sex, as well as to the characteristics of the people among whom he lived, to the end that each might be educated for that sphere of activity and usefulness to which the Creator had destined him.

He regarded Form, Number, and Language as the essential condition of definite and distinct knowledge, and insisted that these elements should be taught with the utmost simplicity, comprehensiveness, and mutual connection.

Pestalozzi, as well as Basedow, desired that *instruction should begin with the simple perception of external objects and their relations.* He wished that the *art of observing* should be acquired. He thought the *thing perceived of less importance than the cultivation of the perceptive powers,* which should *enable the child to observe completely, and to exhaust as far as possible the subjects which should be brought before him.* He maintained that every subject of instruction should become an exercise of thought, and that lessons on *form, size, number, place,* etc., would give the best occasion for it.

He thought highly of arithmetic as a means of strengthening the mind, and he also introduced Geometry into the elementary schools, with the arts of drawing, designing, and modeling growing out of it.

He would *train the hand, the eye, the touch, and the senses generally*, without which there can be no high executive power in the arts of civilized life.

He was opposed to the lifeless repetition of the rules of grammar, but rather aimed at a *development of the laws of language from within*—at a knowledge of its internal nature, structure, and peculiar spirit—thus affording the means not only for cultivating the intellect, but for improving and elevating the affections. He, as well as other educators of his time, introduced vocal music into the circle of school studies on account of its powerful influence upon the heart. Not satisfied with singing by rote, he included in his course of instruction the elementary principles of music—Rhythm, Melody, and Dynamics.

He discouraged that abuse of the Socratic method which attempted to *draw something out of children before they had received any knowledge;* but, on the contrary, recommended in the earliest periods of instruction the established method of dictation by the teacher and reproduction by the pupil.

Pestalozzi strongly *repudiated the opinion that religious instruction should be exclusively addressed to the understanding.* He showed that religion lies deep in the hearts of men, and that it should not be so much enstamped from without as developed from within; *that the basis of religious emotion is to be found in the childish disposition to love, to gratitude, to veneration, to obedience and confidence toward parents; that these feelings should be cultivated, strengthened, and directed toward God;* and that religion should be formally treated of, at a later period, in connection with the feelings thus excited. As he required the mother to direct the first development of all the faculties of her child, he assigned to her especially the task of first cultivating the religious feelings. He thought that mutual affection ought to reign between the educator and the pupil, whether at the home or school, in order to render education effectual and useful. He was not, therefore, disposed to uphold school despotism, nor did he approve of special incentives addressed to emulation, preferring that the children should be taught to find their own highest and best reward in the delights of knowledge and in the consciousness of duty done.

THESE PRINCIPLES WORTHY OF ATTENTION.

Such were the leading views and principles of this truly great man; and, with all the faults in their practical application by himself in the eccentricity of his character, they are eminently worthy of the profound study alike of the parent, the teacher, the philanthropist, and the Christian. They constitute unquestionably the germs of that great system of means for the complete evolution of the varied and complex forces of our common nature which *is to be*—perchance which already is.

NATURAL ORDER OF DEVELOPMENT OF THE FACULTIES.

The Committee believe that these principles seem to imply the existence of a great comprehensive law or order of development of the human faculties, together with a corresponding order of succession and adaptation in the scheme of truth which must constitute the objects to which these expanding faculties must address themselves as the inexorable condition of their development and growth. Without stopping to argue this proposition, but desiring merely to suggest it, the Committee commend it to the profound consideration of their educational brethren every where. If this proposition be true, it lies at the basis of all educational inquiry, while its complete elucidation will essentially determine the character of all proper educational courses and methods of procedure.

What the character of the primary school should be, what its subjects and methods of instruction, depends upon the preliminary questions:

What is the character and destiny of the beings to be trained therein? What is the condition of their physical, mental, and emotional powers? and what kind of studies, what description of knowledge, what exercises are best suited to meet the wants and exigencies of their present, while having reference, also, to their future condition and circumstances?

SENSATION AND PERCEPTION.

The Committee believe it to be the generally received opinion that, in childhood, all positive knowledge comes through sensation and perception. Sensation arises from the contact of our senses with the outer material world. Perception is the reference of a sensation to its cause. Sensations lead, through observations, to conceptions. Conceptions form the basis of our reasoning, and, through reason, we are led to discover our relations to the material world, to our fellow-men, and to the Creator; and, finally, the will, as the executive power, enables us to act according to the dictates of reason, of conscience, and of duty.

We have thus hinted at what many believe to be the natural order of evolution of the faculties:

1st. Perception through sensation.

2d. Conception through observation.

3d. Reasoning upon the basis of our conceptions, ascending from the concrete to the abstract, from the simple to the complex, from the known to the unknown.

4th. Volition, according to the conclusion reached by reason, acting in harmony with the conscience and the nobler emotions and impulses of our nature.

TRUE ORDER OF STUDIES.

Is there now an order of succession of studies, or of the sciences, corresponding to the order of evolution of the faculties? This has been conclusively shown, we think, by President Hill, Professor Joseph Le Conte, and others, and endorsed by the highest scientific and literary authorities of the age. The question may be determined from at least three different stand-points:

1st. From the history of the rise and progress of knowledge among men.

2d. From a careful examination of the relations, connections, and dependencies of the different special sciences to each other.

3d. From an investigation of the adaptations of the different sciences to the progressive wants of the faculties in every stage of their development.

All these fields have been explored by able men, and, from whichever stand-point the investigation proceeds, the conclusions reached are essentially the same, and they seem strikingly to confirm each other. Without going farther into this question, it may be remarked that, while the perceptive faculties are the earliest to manifest themselves in the order of time, so those sciences which address themselves the most directly to these faculties, to wit, those which deal with ideas of space, form, size, number, place, weight, color, etc., are the simplest of all, lie at the basis of all, and are best adapted of all, as experience and reason alike show, to meet the demands of these early stages in the education of the young.

LAWS OF CHILDHOOD.

In childhood, all is activity; the senses are keenly alive to every impression made upon them; the spirit of inquiry is awake, and runs abroad in every direction in search of knowledge; the perceptive powers are at work—they must be directed, and, if possible, sharpened; the imagination riots wildly in childish dreams—it must be chastened and corrected by deliberate and sober appeals to facts, to actual things, and thus gradually enticed to its appropriate work of aiding in the formation of correct conceptions; the affections are fresh and warm; the confiding innocent desires to live and move in an atmosphere of kindness and love; the bodily powers, though comparatively weak, are restless, and ever panting for wholesome employment.

THE TRUE EDUCATIONAL METHOD.

The question is, How are these conditions, so perfectly normal, to be met? How shall the development of the child, heretofore assisted by Nature's own method, be continued and perfected? How shall his young nature, leaping and bounding in joyousness and love, reveling in the pleasure of knowledge, be preserved in its freshness, and vigor, and purity? Not, surely, by forced and unmeaning strifes with mere words and phrases, not by the mechanical drudgery of loading the memory with dry formulas and senseless rules, not by the mastication of rudimental books, nor by those endless stripes which have no healing power.

This question, in the opinion of the Committee, can be solved only by efforts in the direction to which these suggestions tend. Our subjects and methods of instruction must be naturalized. The course of true education is the course of nature. Man's method, to be effective, must follow God's method. As surely as our Divine Father has a plan in creation, so surely has he also a plan in education. By the light of history and revelation we see how he is guiding, instructing, educating the human race through the ages. Aided by the experiences, the discoveries, the inventions, the sufferings, the reverses of past generations, we have become exalted to Heaven in respect to our rights, our privileges, and blessings.

So children should be taught, as far as possible, by their own actual experience, and not so much by mere dicta, not so much by taking on trust what others say, and write, and print, but by more frequent and persistent intercourse, or experience, if you please, with those objects, qualities, and properties, the existence of which gives to language so much of its force and utility.

The Committee have thought it due, alike to the occasion which has called them together, as well as to the important movement which has here been inaugurated, to give expression somewhat at length to the foregoing views. They are too well aware of the obstacles which nearly every new enterprise, however noble, is doomed to encounter, not to embrace an opportunity so grave as the present to give it a substantial and hearty support.

AN IMPORTANT REVOLUTION AT HAND.

The examinations which it has been their high privilege to witness during the present week have impressed them with the conviction that we are on the eve of a great and important revolution in the education of our country. The system which has been developed from the principles herein before stated is yet essentially foreign. And as it was a doctrine of Pestalozzi himself that education, to be true, must have constant reference to the character of the people among whom it is to be dispensed, so it is evident that the system which has been exhibited before us is yet to be somewhat modified—Americanized—to meet the peculiar characteristics of our people and country. Systems and methods must change, "but principles are in their nature eternal," says Professor Crosby; "and it is their office to guide and direct amid all the vicissitudes of circumstance, condition, event, fortune." So, while adhering to the unchanging dicta of well-grounded principle, we would joyfully accept in the system of methods whatever is suited to our special wants, characteristics, and circumstances as a people.

SUCCESS OF THE EXPERIMENT AT OSWEGO.

How well the methods presented by the exhibitions from the Oswego primary schools are adapted to carry out the theory upon which these methods are based, the Committee have endeavored to give their professional brethren and fellow-citizens at a distance the means of judging, by presenting an abstract of each exercise, together with the precise aim of the teacher in each case. The ages of the children, together with the grades of the classes, will be found stated in the proper places. The number of classes presented will also be learned by an examination of the accompanying statement. It will be observed that a wide range of topics was developed by the classes, embracing lessons of various grades, on Form, Size, Weight, Color, Place, Number, Language, Objects, Plants, Animals, Shells, and including also exercises in Phonic Reading and Gymnastics.

The Committee are also most happy in bearing testimony to the universal fidelity of the teachers and superintendent to that cardinal principle of Faith and Love which the great Pestalozzi affirmed must be the basis of all true education. The evidences of mutual kindness, respect, and affection between teachers and taught have been too palpable to be questioned. Let these devoted teachers rest assured that they are laying up imperishable treasures of future joy and gladness, alike for themselves and the long procession of the generations which shall rise up to call them blessed.

[Previous to commencing the exercises of the examination, the Secretary of the Board of Education stated that the primary schools of Oswego are divided into three classes, called A, B, and C. The C class is the lowest, B next, and the A class the highest. The children, on entering school, are placed in the C class, where they remain under the same teacher for one year, near the end of which time an examination takes place, and those who are sufficiently advanced are promoted to the B class at the commencement of the succeeding term, where they remain another year; they are examined again, and promoted to the A class; toward the end of the third year they are examined for promotions to the junior schools.]

EXAMINATION EXERCISES.

The first exercise witnessed by the Committee was a review of the C class, primary. Ages of children, 6 to 7 years.

LESSON ON FORM.

The children stood in a semicircular line on one side of the table, on which were placed several of the more common solids, as a sphere, a cube, a cone, etc. The teacher called upon the children to distinguish different solids, as the sphere, hemisphere, cylinder, cone, and cube, and to give their names. Then, holding up a cylinder, she asked, "What is this called?"

Children. "A cylinder."

Teacher. "Yes, this is a cylinder; and when we see any object of this shape we say it is *cylindrical.* Now look about the room, and see if you can see any thing that is of this shape."

C. The stove-pipe—the post.

T. Yes; and because the stove-pipe and the post are of this shape, we call them—

C. "Cylindrical."

In this manner the terms spherical, conical, etc., were presented to the children.

The teacher placed a cube before the children, and requested them to name objects of that form; then a sphere, and to name objects of a spherical form, etc.

Several of the solids being placed on the table, the teacher naming objects, as orange, stick of candy, church spire, etc., the children would say which solid they resembled in shape.

To show that the children understood the terms *face* and *surface*, they were requested to touch the surface of a sphere, the outside of a sphere, the faces of a cube and of a cylinder; then to point out the plane and curved faces of different solids; then to take solids, and tell by what faces they were bounded.

The manner of conducting this exercise, and the familiarity manifested with the subject, gave evidence that the children possessed a knowledge of it other than that derived from the words themselves. The second exercise was a

LESSON ON SIZE.

Review of C class, primary. Ages of children, 5 to 7. They had attended school nine months; have had instruction in size during some eight weeks, about twenty minutes per day.

The children were requested to hold their forefingers one inch apart while the teacher measured the space between them.

Then children were required to draw lines on the blackboard an inch in length, and others to measure them, stating whether too long, too short, or correct.

Next they were required to tear papers an inch in length; then to tear them two inches in length; then to fold them three inches in length, and so on, the teacher measuring them meanwhile. At least two out of each three tore and folded their papers of the exact length named.

Then the children were requested to draw lines on the blackboard one foot in length, then to divide them into twelve inches.

They readily measured inches, and feet, and yards, both with the rule and with the eye, and drew lines representing them, showing that they understood the relations of these to each other, as well as the lengths of each.

FORM AND SIZE.

Review of A class, primary. Ages of children from 7 to 9.

Teacher. Find me a solid whose surface is not divided. The children took from the table spheres and spheroids.

Teacher. Find me a solid whose surface is divided into two parts or faces—one divided into three faces—one divided into six faces. Now a solid with one plane and one curved face.

In each case the children selected the correct object.

The teacher then called upon one pupil to draw upon the blackboard the plane face of a square two inches on a side; another one of a square six inches on a side; another of a rhomb two inches on each side; an equal triangle one inch on a side; a plane face of a cylinder three inches in diameter; a square twelve inches on a side. The children then drew lines of various lengths, as called for by members of the Committee; also plane figures of various sizes, and, among others, circles two feet in diameter, then of two feet in circumference.

The teacher called upon the children, one at a time, to select laths of given lengths, and place them on the floor so as to represent the elevation of one end of a house. Another pupil drew each part of the house on the blackboard as it was represented by the laths.

TUESDAY AFTERNOON.

LESSON ON FORM.

Showing the transition from Form to Elementary Geometry. Review of C class, junior. Ages of children, 9 to 12.

The children drew lines on the blackboard, and described them. They represented, and then gave definitions of a point, straight line, length, direction, and of the distinction between different kinds of angles.

A pupil drew upon the blackboard a horizontal line, and an oblique one intersecting the first, and then proceeded to demonstrate that, "if two straight lines intersect each other, the opposite or vertical angles are equal." In giving the demonstration, the pupils used letters to designate the lines and angles. At the suggestion of one of the Committee, figures were substituted for the letters, and one of the same pupils called to demonstrate the proposition. The readiness with which the pupil went through with it, using figures in place of letters, was very satisfactory to the audience, their approbation being manifested by applause.

LESSON ON COLOR.

Review of C class. Ages of children, 6 to 8. Object of the lesson—to cultivate the perception of color.

Worsted, and cards of various colors, were placed upon the table. The teacher called upon one child to select all the reds, and place them together; another, to select all the yellows, and place them together; another, the blues; another, the greens, etc.

The children were then requested to name all the red objects that they could see in the room; then those of the other colors successively.

Next, one child was called upon to name a color, and another to name an object of the same color. Then one child would name an object, and another name its color.

DISTINGUISHING SHADES AND TINTS OF BLUE.

The teacher next proceeded to give a *new lesson* to the same class, the object of which was "to teach the children to distinguish blue, and its shades and tints."

The teacher requested the children to find the bluest of the blue objects on the table. They having selected cards which the teacher pronounced correct, she took the cards, told them all to close their eyes, then she placed the same cards upon the table again among the other blue ones, and requested the children to find them again. When they could readily select the bluest cards, the teacher told them that the bluest blue is called the *standard blue*. Then the children were exercised in finding the standard blue.

Next, two cards were held up, one dark blue and one light blue, and the children told that the light blue is called a *tint of blue*, and the dark blue a *shade of blue*—the *tint* is lighter than the standard blue, and the *shade* is darker than the standard blue. Then the children were exercised in finding *tints* and *shades* of blue.

LESSON IN MIXING COLORS.

Review of A class, primary. Children from 9 to 10 years of age.

The children were led to distinguish primary, secondary, and tertiary colors from mixing colors. The teacher held up vials containing liquids of red, yellow, and blue. She then mixed some of each of the *red* and *yellow* liquids, and the children said the color produced by the mixture is *orange*. She then mixed *yellow* and *blue*, and the children said that *green* had been produced. Then she mixed *blue* and *red*, and *purple* was the result.

The teacher printed the result of each mixture on the blackboard thus:

First Colors, or Primaries.		*Second Colors, or Secondaries.*
Red + Yellow	=	Orange.
Blue + Yellow	=	Green.
Blue + Red	=	Purple.

Next she proceeded to show how the idea and term *tertiary* is derived from the secondaries by mixing the secondaries, and printing the result on the board as before:

Secondaries.		*Third Colors, or Tertiaries.*
Green + Orange	=	Citrine.
Orange + Purple	=	Russet.
Purple + Green	=	Olive.

After the children had read over in concert what had been printed on the board, it was erased, and the pupils were required to state from memory what colors are produced by mixing primaries, with the names of each secondary; also, what by mixing the secondaries, and the name of each tertiary. An exercise on *Harmony of Colors* was then given to the same class of children. They were requested to select two colors that would look well together, and place them side by side; then two were placed together that do not harmonize. During these exercises, the teacher printed on the board,

Primary *yellow* harmonizes with secondary *purple.*
" *red* " " " *green.*
" *blue* " " " *orange.*

This was read by the pupils, then erased, and the individuals were called upon to state what color will harmonize with these several colors, as their names were respectively given.

TUESDAY EVENING.

The exercises were held in Doolittle Hall, and were witnessed by a large audience. First there was given a

LESSON ON OBJECTS—5th STEP,

to the B class, junior school, the aim of which was to lead the children to distinguish *acids* from *alkalies*, and to show some of the effects of each.

A class of boys and girls were arranged upon the stage so that they could observe the vials of liquids and solids upon the table in the centre. After introductory remarks by the teacher, alluding to the classification of children in school according to their knowledge, she requested one to arrange the vials upon the table into classes. He placed the vials containing solids in one group, and those containing liquids in another. The teacher remarked that, although that was one way to classify them, yet there was a better way, and that was by tasting, placing those which have a similar taste in the same class.

The children were each given some cream of tartar to taste; they pronounced the taste *sour*. The name of the substance was written on the blackboard. Then they were given some sal soda to taste, and they said it tasted "bitter and burning." The name of this was written on another part of the board. The teacher then told the children that we called those substances which taste sour *acids*, and wrote the word *acids* over cream of tartar. She then told them that the name for those substances which have a "bitter, burning taste," is *alkalies*.

This word was written over sal soda. Then the children were given some vinegar to taste, and required to tell in which column its name should be written. They gave "acids." The teacher proceeded in a similar manner with *ley*, *pearlash*, *tartaric acid*, and *soda*, and the children designated the column in which the word should be placed. Some oxalic acid was produced, and the children told that it was poison, hence should not be tasted, but that it also was sour, and requested them to name the column in which its name should be written. The words on the blackboard were written thus:

ACIDS.	ALKALIES.
Cream of tartar.	Sal soda.
Vinegar.	Ley.
Tartaric acid.	Pearlash.
Oxalic acid.	Soda.

The children having learned a distinction between acids and alkalies, the teacher produced a vegetable dye, obtained by boiling a purple or red cabbage in water. She poured equal quantities into two glasses. Into one of these she poured some acid, and into the other a little alkali. The children were required to observe the effects of the acid and of the alkali upon the vegetable dye, and then to describe these effects.

Children. The acid turns the vegetable dye to a *red*. The alkali changes it to a *green*.

Teacher. Now what can you say of the *taste* of acids?

C. They taste sour.

The teacher now wrote on the board, "Acids have a sour taste"

T. What can you say of the effect of acids upon a vegetable dye?

C. Acids turn vegetable dyes to red.

The teacher wrote this on the board also.

T. Now what can you say of the taste of alkalies?

C. They have a bitter, burning taste.

T. We call this bitter, burning taste of alkalies an *acrid* taste. What do we call the taste of alkalies?

C. An *acrid* taste.

The teacher wrote on the board, "Alkalies have an acrid taste."

T. What can you say of the effect of alkalies upon vegetable dyes?

C. Alkalies change vegetable dyes to green.

This was also written on the board.

Afterward the red and green dyes were mixed, when the whole assumed its original color. After trying similar examples with other acids and alkalies upon the purple water or vegetable dye, the children were told that acids and alkalies *neutralize* or destroy each other. The teacher then wrote on the blackboard,

Acids and alkalies, when mixed together, neutralize each other.

Next a bottle partly filled with soft water was produced, and a little soft soap added, when it was given to the pupils to shake. Soapsuds were produced. A few drops of acid were then added to the contents of this bottle, and on shaking it again the suds disappeared. Then a little ley was poured into it, and on being shaken suds were again produced. Then the children were led by another experiment to perceive that acids and alkalies neutralize each other when mixed.

A few other experiments were tried, illustrating in similar methods the processes of teaching children things and ideas before the words of description are given. Whenever the terms or words given by the pupils in describing what they saw were inappropriate, these were corrected by the teacher.*

WEDNESDAY MORNING.

LESSON ON ANIMALS.—THE SEAL.—3d STEP.

This was a *new* lesson, given to children of the average age of eight years, from the C class, primary school. The object of the lesson was to show the children how the parts of the animal are adapted to the habits of it.

The teacher held before the children a picture of the seal, upon land, by the side of open water.

T. Where, in this picture, do you see the animal?

C. On the land.

T. What do you see near it?

C. Water.

T. Where do you think it lives?

C. In the water.

T. Does it spend all of its time in the water?

C. No; it spends part of its time on land.

T. What other animals live in the water?

C. Fishes.

T. Fish breathe by taking the air from the water by means of their gills. The water and air passes into its mouth, and the water passes out through the gills. The seal breathes as we do, therefore he can not remain under the water as fish do. His head must be above the water to breathe. The seal feeds on fish. Now can you tell me why he goes into the water at all?

C. To catch fishes for food.

The teacher now printed upon the blackboard, "The seal can live in water and on land." This was read by the children. They now pointed out in the picture the parts of the seal, and described their shape. In developing the idea of round, the teacher showed the children a round and a flat object, and they named the one which most nearly resembled the shape of the body.

In developing the idea of tapering, the children were requested to point out the largest part of the body, and the smallest.

T. Why does the seal need a round, tapering body?

To develop this idea, they were asked which boat would move through the water most easily, one with a blunt end or one with a sharp end? Their attention was then called to the small head and tapering shoulders of the seal, and thus to its adaptation for moving through the water. The teacher then printed on the board,

The body of the seal is round and tapering.

This was read by the children in concert.

A picture of a fish was now shown, and the children requested to observe its shape. The teacher then led them to compare its organs of progressive motion with those of the seal, and to observe the adaptation of these organs to the special purposes for which they are designed.

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* At the close of this lesson, a paper, written by Miss Jones, of London, at present the principal of the Training School in Oswego, was read; also an address was delivered by N. A. Calkins, of New York. Both of these papers may be found at the close of this report.

C. The seal has broad, flat feet, which it uses to aid it in swimming.

This was printed on the blackboard.

T. Why would not fins suit the seal as well as they do the fishes?

C. Because the seal could not go on land with fins.

The children were then led to compare the covering of the seal with that of the fish, to show the adaptation of the warm fur to its mode of life. Their attention was also directed to the intelligence and docility of the seal, and the resemblance of its head, in shape, to that of the dog. His disposition was compared with that of the dog; humane feelings excited by describing the manner of hunting and killing the seals, and kindness inculcated.

As a summary, the children read what had been written on the board; then repeated it after it had been erased.

LESSON ON HORNS OF ANIMALS.—4th STEP.

A class, primary. Average ages 10 years.

The object of the lesson was to give a general idea of horns, their form, position, and uses.

Children were requested to name animals having horns. Afterward the teacher presented to them pictures of a cow, goat, and a deer, and the class were requested to observe them carefully, and to state how their horns differ.

C. The cow's horns have no branches; the goat's horns have no branches; the deer's horns have branches.

T. Look at the form of the horns.

C. The horns differ in form.

To lead the children to the idea of horns differing in position, lines were drawn upon the blackboard in different positions. When this idea had been gained, their attention was directed to the position of the horns of the cow. These were described as being *placed on each side of the head, and slanting upward and outward.*

The horns of the goat were described as *placed on the top of the head, and slant upward and backward.*

The horns of the deer are placed on the top of its head, and slant in different directions. These descriptions were printed on the blackboard.

To develop the idea of the shape of the cow's horns, a pair of horns was presented, and the children requested to describe them.

C. The horns of the cow are round, large at the base, and tapering.

The teacher not having a pair of goat's horns present, pointed to the picture, and told the children that the horns of the goat are more slender, and less curved than those of the cow.

Deer's horns were shown, and described as spreading out like the branches of a tree. The children were led to observe that the cow's horns are hollow, while those of the deer are solid. They were told that the goat's horns were also hollow; and that, while the cow's and goat's horns were fixed, or remained permanent upon the heads of these animals, the horns of the deer are shed every year, new ones growing each summer.

The attention of the children was called to the uses of horns to animals as weapons of defense, and of their uses to man in the manufacture of combs and various other articles.

LESSON ON SHELLS—3d STEP OF OBJECTS.

Given to a C class, primary; ages of children 5 to 6 years.

Object of the lesson was to lead the children to observe the parts of the shell, also to perceive the appropriateness of the names given to the parts.

The teacher, holding up a shell before the class, told them that an animal once lived in that shell, and then asked, "What do you live in?"

Children. Houses.

T. This was the house of an animal. Now I want you to look at it, and see if you can find different parts of this shell. James may point to some part of it.

The boy touched the small point at one end. The teacher said this part is called the *apex* of the shell. Now point to the apex of this cone; of the pyramid. The word *apex* was now printed on the blackboard.

Mary may touch some other part of the shell. She put her finger upon the largest part, or body of it; and the teacher said, this is called the *body* of the shell, and printed the word on the board.

Pointing to the whorl on the shell, the teacher said, "Look at this; see how it winds around the shell; this part looks as if it whirled around, so we call it the *whorl.*" This word was also printed on the board.

The opening of the shell was pointed at, and the children asked to give it a name. No one replied, and the teacher requested a boy to open his mouth, and the other children to look at it, upon which several of them suggested the word *mouth* as a good name for the opening of the shell. This was printed on the board, and the children told that it is the name for that part of the shell.

Next the edges of the mouth were pointed at, and the children referred to parts of their own mouths for a name. *Lips* was readily given, and printed on the board.

The groove leading to the mouth was pointed at, and the children told to call it a *canal.* The word was then printed.

The attention of the children was directed to the lower part of the shell, containing the canal, and the children asked if they had ever seen any part of a bird that resembled it in shape. "The bird's beak," was the reply. "That is right; and we will call this the beak of the shell," said the teacher. This word was also printed on the board.

A child was now called to take the shell and point out the parts as the children named them. The teacher pointed out the parts, and the children named them.

LESSON ON SHELLS—4th STEP OF OBJECTS.

Given to an A class, primary, ten children. Ages 8 to 10.

Object of the lesson, to show the use of shells, their formation, and general classification.

The children were shown several shells, and asked where they are found.

Children. On the lake-shore, the sea-shore, and in rivers.

T. How are shells obtained from the sea?

C. The waves wash them on shore.

T. The creatures found inside of the shell are called mollusks. The word was written on the blackboard, and the children told that it means soft. To develop this idea, the children were directed to press their fingers upon their cheeks, then upon their forehead, and to tell how they feel. They were asked whether they had seen oysters, and how they feel; and why they feel soft? The answer obtained was that the oyster has no bones.

T. What can we say of the oyster because it has no bones?

C. It is boneless.

The teacher printed on the board, and the children repeated together,

Mollusks are soft and boneless.

The children were referred to the white cold fluid or blood of the oyster, and it was compared with their own red warm blood.

The teacher wrote on the blackboard,

The blood of the mollusk is cold and colorless,

and the children repeated it together.

The shells were given to the children to examine, and see if they could tell of what materials they are made, and who made them. To develop the idea of their formation, a piece of chalk was shown, and the children told that one of the substances of which the shell is made was like that. They were asked if a shell made of so brittle a substance would be strong. The children were now told that the shell is made of lime which is obtained from the water, and this is mixed with a gluey substance, which the mollusk obtains from a portion of its own body, to stick it together. They were shown the smooth, polished outside of the shell, and told that the mantle which covers it deposits a substance which hardens and forms the beautiful polished surface. The children were also told how the little mollusk increases the size of its shell from year to year, as the animal itself grows larger, by making additions on the edge of the shell. Sometimes, when the shells are dashed against the rocks by the waves and broken, the mollusk repairs the broken part.

The idea that the shells are a means of defense for the mollusk was developed, and the teacher wrote on the board,

Shells serve as a house and armor to the mollusk,

and the children repeated it. Following this, the idea of God's wisdom and goodness was presented in providing every thing so wisely for these little animals.

The teacher also gave some exercise in the classification of shells into univalves, bivalves, and multivalves. And, as a summary, the pupils read from the blackboard,

Shells are inhabited by animals called mollusks.
Mollusks are soft and boneless.
The blood of the mollusk is cold and colorless.
Shells are composed of lime and a kind of gluey substance.
Shells serve as a house and armor to the mollusk.

WEDNESDAY AFTERNOON.

Exercises were held in the school-room.

LESSON ON PLACE.

A review of a C class, primary. Ages of children 6 to 7 years.

The Object of the lesson was to distinguish and define place, as nearer, farther, between, to the right, to the left.

2d. To represent objects in these relations.

3d. To distinguish the cardinal and semi-cardinal points.

First, objects were placed on a table, and the children requested to observe the position of each, after which the teacher would remove them, and call upon individuals to put them in the same position again. Then the position of these objects on the table were *represented* by drawing on a slate held in a horizontal position. Then the same positions were represented by drawings on the blackboard. Children were called upon to point with their fingers; also to walk in different directions; also to tell in what direction they must walk to go from their seat to some given part of the room. The teacher would name a point of compass, and request the children to point toward it, while she would point in some other direction. This made each pupil think and act for himself.

LESSON ON PLACE.

Given to the A Class, primary. A review. Children, average age 9 years.

An outline map of the city of Oswego was placed before the class, and the children were required to point out the various localities, tell the distance of one from another, the direction in which a person must go in proceeding from one place to the other. The outline map was drawn on a scale of one foot to the mile; the pupils ascertained distances, after estimating by the eye, by taking a tape measure and ascertaining the number of feet from one point to the other.

A drawing of the school-room made to a scale, previously placed upon the blackboard, was exhibited.

Rivers, lakes, canals, dams, locks in canals, etc., were described by the pupils in answer to questions by members of the Committee.

LESSON ON NUMBER.

A review of the C class, primary. Ages of children 6 to 7 years.

The object of this exercise was to show how addition, subtraction, and multiplication are worked out with objects.

The children were arranged in front of a shelf containing pebbles in boxes or compartments. The teacher said to the first pupil, "I will give you 1 pebble; how many must you add to it to make *ten?*"

To the next she said, "I will give you 3 pebbles; how many must you add to these to make ten?"

To the next, "I will give you 2 pebbles; how many must you add to make ten?"

The children would proceed to take other pebbles from the boxes, and counting, add enough to make ten. As each finished the number, the hand would be raised. When all had completed the number assigned, the teacher commenced by asking the first pupil, "How many did I give you?"

Child. "One."

T. "How many did you add to make ten?"

C. "Nine."

T. (To the next pupil.) "How many did I give you?"

C. "Three."

T. "How many did you add to make ten?"

C. "Seven."

In this manner the teacher kept all the pupils at work, and each at work on a separate problem. Subsequently the pupils were requested to see in how many ways they could arrange given numbers. One was to arrange the number *five* in as many ways as possible, as 4 and 1, 2 and 3, 2 and 2 and 1, 2 and 1 and 1 and 1, 1 and 3 and 1, etc. Another was told to arrange *six*, another *seven*, another *eight*, in as many ways as they could with the pebbles.

The teacher gave them numbers, and then told them to take away less numbers, as, "I give you 8 pebbles; take away 5, and tell me how many remain," etc.

The teacher having placed six marks on the board thus, | | | | | |, rubbed out *two*, and asked, "What have I done?"

C. "Rubbed out two marks."

T. "How many marks remain?"

C. "Four marks."

T. "What may you say, then?"

C. "*Two* from *six* leaves four."

Then seven and eight marks were treated in the same way.

Again, the teacher gave them 2 and 2 and 2, to state how many 3 twos are. Then she asked how many are 4 twos, 2 threes, 5 twos. In each instance the pupils represented the numbers by arranging pebbles in groups corresponding with these numbers.

This exercise was followed by a lesson to show how children were first taught multiplication. The teacher placed two pebbles on the table, then two more, and asked, "How many pebbles were on the table?"

C. "Four pebbles."

The teacher then made two marks on the board, then two more, thus: | | | |, and asked, "How many are two marks and two marks?"

C. "Four marks."

Then the teacher placed three pebbles on the table, then three more, and asked, "How many pebbles are on the table?"

C. "Six pebbles."

She then made three marks thus, | | | | | |, and asked, "*Three* marks and *three* marks are how many marks?"

C. "Six marks."

Subsequently the teacher would change the question by saying, "How many are two times two pebbles?" "How many are two times two marks?" etc.

LESSON ON NUMBERS.

Given to the A class, primary. Age of children 8 to 9 years.

The design of the lesson was to show the relations between addition, multiplication, and division.

The teacher wrote on the blackboard, and the children repeated the following:

3+3=6, 6+3=9, 9+3=12, 12+3=15, etc., up to 99. Then the teacher wrote 99−3=96, 96−3=93, and so on down to 6−3=3.

Then 6+6=12, 12÷6=2,
6+6+6=18, 18÷6=3,
6+6+6+6=24, 24÷6=4, and so on.

The children read 6+6=12, two times 6 are 12, etc.

7+7=14, 14÷7=2,
7+7+7=21, 21÷7=3,
7+7+7+7=28, 28÷7=4, and so on to 100.

Children read 7+7=14, two times 7 are 14. 14 divided by 7=2. 7+7+7=21, three times 7 are 21. 21 divided by 7=3.

Such lessons as these the children placed upon their slates while at their seats between class exercises.

LESSON ON LANGUAGE.

Given to the C class, primary. Age of children 7 to 9 years.

The children were requested to name something that is *hard*. They mentioned, and the teacher wrote on the board the following:

Coal is hard.
Wood is hard.
Gold is hard.
Iron is hard.

The teacher inquired if any one in the class could tell her how to write the same in one sentence. Several hands were raised, and one pupil said, "Coal, wood, gold, and iron are hard." This was written upon the board.

Then the pupils were asked to tell some quality of glass. They repeated, and the teacher wrote upon the board,

Glass is colorless.
Glass is hard.
Glass is transparent.
Glass is brittle.
Glass is smooth.

Then the pupils were requested to tell how to write these qualities in one sentence. They said, "Glass is colorless, hard, transparent, brittle, and smooth." This sentence was placed on the board.

LESSON ON LANGUAGE.

Given to the A class, primary. Ages 9 to 10 years.

This lesson in language was designed to teach the pupils discrimination in the use of descriptive words.

The children were to give any term which may be used in describing a face, and the teacher wrote them on the board as mentioned. They gave *pretty*, *homely*, *white*, *rosy*, *freckled*, *wrinkled*, *blushing*, *happy*, *bashful*, *sad*, *pale*, *cheerful*, *thin*, *sorrowful*, *sour*, *ugly*.

When a sufficient number of words had been written upon the board, the teacher called up a pupil to mark each word that may be used to describe one face. The first pupil marked words making the following description: "Happy, thin, wrinkled, pleasant, pale, pretty, white, cheerful face."

Another marked "Ugly, freckled, homely, sour face."

When one of the pupils chanced to mark words that expressed opposite qualities, as pretty, homely, cheerful, sour, the others made the correction.

THURSDAY MORNING.

The exercises of this forenoon were held in the school-room. The opening exercise was a lesson in *Moral Instruction*. The teacher placed a colored engraving (representing Moses stretching his arm over the Red Sea, the children of Israel crossing over on dry land, and the pillar of fire) on a stand, in view of the entire school. The teacher read a simple description of this event from a little volume entitled "Line upon Line," then called upon several of the children to point out on the picture the objects mentioned in the lesson from the book, also to answer questions relative to the event. At the close of this exercise the school arose and repeated together the Lord's Prayer. The entire exercise seemed very interesting to the children, all of whom gave strict attention, and it was a beautiful sight to the observers.

OBJECT LESSON.—3d STEP.

Given to the C class, primary. Children 6 to 7 years of age.

The object of the lesson was to develop one quality—the idea of *malleability*, and give the term.

The children were shown pieces of lead, and asked to say something about it.

Children. Lead is heavy. Lead is gray. Lead shines when cut. Lead is opaque. Lead is tenacious.

The children handle the lead, passing it around. The teacher beats a piece of lead with a hammer, and having flattened it so that it is quite thin, she shows it to the children again. They say it has been flattened. The teacher then added, "Lead will flatten by being beaten, and because we can flatten it by beating it we say *lead is malleable.*" The children repeat this.

Next the teacher pounded a stone, and asked if it would flatten by beating it. She then asked, "Is the stone malleable?"

C. Stone is not malleable.

T. Why?

C. Because we can not flatten it by beating it.

The teacher then pounded a piece of chalk, that the children might see that we can not flatten it as we can lead, and hence that is not called malleable. The pupils were now requested to mention other objects that are malleable. They having named several, she inquired, "Why are these objects said to be malleable?"

C. Because we can flatten them by beating them.

The teacher and pupils then repeated together, *Any thing that can be flattened by beating it is said to be malleable.*

LESSON ON ANIMALS.—THE IBIS.—3d STEP.

Given to a C class, primary. Ages 7 to 8. The object of the lesson was to show parts, and the adaptation of these to the habits, mode of life, etc.

The teacher held the picture of the ibis before the children, and called upon one to come and point out some part of the bird. The child pointed to the head.

T. What can you say of the head of the ibis?

C. The ibis has a small head.

Another comes and points to the eyes, and says, "The ibis has small eyes." Another points to its beak, and says, "The ibis has a long, curved, tapering, sharp beak."

T. Why do you say the beak is tapering?

C. Because it is smaller at one end than it is at the other.

The children were requested to observe the neck, and one was called to point to it in the picture and describe it.

C. The ibis has a long, slender neck."

T. What can you say of its legs?

C. It has long slender legs.

T. Where do you think it lives?

C. In swampy places.

T. Why?

C. Because it has long legs.

T. Why does it need a long neck?

C. To reach down in the water and mud to get its food.

T. Why would not short legs do as well?

C. The waves would wash him away.

T. Why does he have a long beak?

C. So it can reach its food without putting its head under the water.

OBJECT LESSON.—PEPPER.

Given to an A class, primary. Ages of children 9 to 10.

Object of the lesson to develop qualities of the object. Grains of pepper are shown to the children. They say it is vegetable. The teacher prints on the board, *Pepper is a vegetable.*

The children say it is hard. One of them spells hard, while the teacher prints, *Pepper is hard.*

After tasting it, they say, "Pepper is biting—pungent." This is printed on the board as the children spell the words.

T. Why do you say pepper is pungent?

C. Because it has a burning taste.

T. Can you think of any thing else that can be said of pepper?

C. It is black. It is rough. It is spherical.

These sentences were placed on the board as the words were spelled. Allspice was shown them, and the two compared. They said, "Pepper is rough, and allspice is smooth."

T. What can you say of its uses?

C. It is used for preserving things.

T. What else may be said of it?

C. Pepper is stimulating, because it has a burning taste. It is wholesome.

T. It grows in very warm countries, hence we say it is *tropical.* It does not grow in our country, so we say it is *foreign.*

This was followed, as usual, with a brief summary of what had been gone over, to fix the important points in the memory.

A CLASS FROM A COUNTRY SCHOOL INTRODUCED.

In accordance with a request of the Committee of Examination, and that they might see the first steps in teaching children who have never had any instruction by the system of Object Lessons, a class of children was procured from a school outside of the city and placed before one of the teachers.

There was placed on the table before them cubes, spheres, cylinders, cones, and other solids.

The attention of the children was first called to a sphere. They were told to observe its shape; then its name was told them, and they required to repeat it. Then they were requested to select a sphere from the objects on the table; then to point to other objects having the same shape. The children having learned to distinguish this form, their attention was called to the cylinder, and they were led to select others like it. Then its name was told them. Afterward they were requested to look about the room and find something that had the shape of the cylinder. The children pointed to the stove-pipe, also to the pillars in the centre of the school-room. It was observed that the children distinguished resemblances in different objects much more readily at the close of the exercise than at its commencement.

The same class was next placed in charge of another teacher. She undertook to develop the idea of *vegetable.*

A small rose-bush was shown them, and they were asked if they had ever seen any thing like it before. Then they were requested to name some other plant which they had seen. They mentioned rose-bush, gooseberry, currant. They were asked what plants they eat which grow in the garden, and their reply was "Cabbage."

They were shown a picture of a leaf and a real leaf, and an effort was made to teach them to express a distinction between them; but it was discovered that they were German children, and had learned so little of our language that the teacher must explain new words which expressed qualities to them in German before they could comprehend them.

THURSDAY AFTERNOON.

Exercises were held in the Court-house, and devoted to

PHONETIC READING.

Exercises were given with a C class, primary, in the 1st, 2d, 3d, and 4th steps.

1st Step. Teaching letters by their *forms.*

I was described as one perpendicular line.

V " " " two slanting lines.

D " " " one perpendicular line, and one curved line on the right, touching the perpendicular line at the top and bottom.

B was described as one perpendicular line, and two curved lines on the right, touching the perpendicular line at the top, in the centre, and at the bottom.

The design of this exercise was, *first,* to secure accurate observation; *second,* to secure accurate expression. These were to constitute the foundation of subsequent teaching.

The children were also given slips of straight and curved pasteboard, from which to form these letters and then to tell their names.

2d Step. The sounds of the letters were repeated as simple vocal exercises, without referring them to the letters which represent them.

3d Step. Now initial consonants were combined with syllables consisting of a vowel followed by a consonant, as,

b—ud,	bud,	d—og,	dog,
c—ot,	cot,	c—at,	cat,

In this exercise, the powers or sounds of the letters only are used.

4th Step. Here two initial consonants were used, as,

bl—ack,	black,	br—ay,	bray,
cl—oth,	cloth,	br—ow,	brow,

The meaning of the words are given in this step.

The 5th and 6th Steps were illustrated with the A class, primary, children about 9 years of age.

Anomalous sounds were considered, and the same sounds represented by different characters, also the same characters representing different sounds.

5th Step. The three sounds of *ch*, also silent letters, initial, central, and terminal letters, were considered:

Ch has the English sound, as in church, chair, chap, chip, chin, chat.

Ch has a hard sound, as in chyme, churn, choir, etc.

Ch has a French sound, as in Chicago, charade, chaise, Chemung, etc.

The words showing examples of these different sounds were given by the pupils, while the teacher wrote them on the blackboard.

Initial silent Letters.—H is an initial silent letter in hour, honor.

Central silent Letters.—D and G are central silent letters in bridge, edge, sign, etc.

Terminal silent Letters.—B and N are terminal silent letters in thumb, plumb, autumn, hymn.

6th Step. Sounds expressed by ou; and long sound of o expressed by different letters; classification of letters, and rules of spelling.

The proper sound of o is expressed by ou in ground, found, round.
" long " o " " " " soul, mould, court.
" broad " o " " " " sought, fought.
" close " u " " " " couple.
" long " u " " " " croup.

The long sound of o is expressed by different letters, as in oat, boat, floor, doe, chateau, sew, coast, sorrow.

Classification of Letters.—Letters are classified, with reference to their sound, into

Vowels, a, e, o, u, and semi-vowels, w, y; liquids, l, m, n, r, ng; mutes, sharp, p, t, f, th, as in thin; mute flats, b, d, v, th, as in then; diphthongs, i, oi, oy, and aspirate h.

In addition to the foregoing exercises, a few simple rules for spelling were deduced from examples of words given, and the exercises of the examination closed.

CONCLUSIONS OF THE COMMITTEE.

In view of all they have witnessed in the exercises, of which the foregoing are brief sketches, and in the light of the best information which they have been able from various sources to obtain upon the subject of "Object Teaching," and what is known as the Pestalozzian system generally, they feel warranted in giving expression to the following conclusions:

1. That the principles of that system are philosophical and sound; that they are founded in, and are in harmony with the nature of man, and hence are best adapted to secure to him such an education as will conduce in the highest degree to his welfare and happiness, present and future.

2. That the particular methods of instruction presented in the

exercises before us as illustrative of those principles merit and receive our hearty approbation, subject to such modifications as experience and the characteristics of our people may determine to be wise and expedient.

In conclusion, the Committee beg leave to present in the form of resolutions the following recommendations:

Resolved, That in the opinion of your Committee, the System of Object Teaching is admirably adapted to cultivate the perceptive faculties of the child, to furnish him with clear conceptions and the power of accurate expression, and thus to prepare him for the prosecution of the sciences or the pursuits of active life; and that the Committee do recommend the adoption of the system in whole or in part, wherever such introduction is practicable.

Resolved, That this system of primary education, which substitutes in great measure the *teachers for the book*, demands in its instructors varied knowledge and thorough culture; and *that attempts to introduce it by those who do not clearly comprehend its principles, and who have not been trained in its methods, can result only in failure.*

All which is respectfully submitted.

(Signed) Wm. F. Phelps,
D. H. Cochran,
David N. Camp,
Thomas F. Harrison,
H. P. Wilbur,
Geo. L. Farnham,
W. Nicoll,
Special Committee on Report.

Approved by the General Committee, and read before the Convention, in Doolittle Hall, on Thursday evening, February 13th, 1862.

The following paper, written by Miss M. E. M. Jones, of London, was read on Tuesday evening by Mr. E. D. Weller.

THE LAWS OF CHILDHOOD.

The merit of the Pestalozzian system is that, recognizing the character of children, it adapts itself to this, doing invariably and systematically what all good parents and teachers do often and intuitively.

Pestalozzi recognized the nature of a child as threefold—physical, mental, and moral. He demanded that this nature should be aided in developing itself simultaneously, harmoniously, and progressively. He noted the threefold characteristics of this threefold nature, and said, "The chief characteristic of a child's physical nature is activity; of his intellectual nature, love of knowledge; of his moral nature, sympathy. No educational system can suit him unless it works by these."

I. Activity is a law of childhood. Its abuse produces restlessness, love of mischief, etc. It were not too much to demand that the number of hours devoted by growing boys and girls to physical exercise, in some shape or other, should equal those devoted to intellectual exercises. This the teacher can not secure. She can, however, insist (as a necessary condition of work) that her pupils shall have two recesses in the morning, and one in the afternoon, each twenty minutes long; that during the time of recess they be not constrained to quietude; for children, unless asleep, can not rest without they play, and they can not play without making a noise; that they shall sit and stand alternately; that they shall have physical exercise between each lesson, unless singing or recess intervene, and that the remainder of the time be honestly occupied in school work.

It is really a sad sight to see young children permitted neither to work nor play, but kept in their seats for two or three hours under pretense of studying. Were schools instituted for the purpose of training little ones to the love of mischief and to idleness, they could hardly adopt better means to secure such an end. To divide a school into two sections, to take *each* alternately, and, while teaching one, to provide the other with something to do (the doing of which is to be tested), as copying printed columns of words, arranging patterns of forms or colors, weighing, measuring, working number exercises on slates or blackboards, drawing the school-room to scale, reproducing on their own slates lessons in spelling or in language. All *this* requires not only the necessary apparatus, but *training*, *energy*, and moral influence on the part of the teacher. It *is* easier, to be sure, to remain in one's seat, calling up one class at a time, and hearing these read and spell in turn, while the rest are commanded "to keep studying."

Now that another method of keeping school is introduced consistently with the greater energy expended by teachers and children, the number of school hours ought to be diminished. It has been amply proved that the children of the Home and Colonial Schools, London, now attending school during five hours, make greater progress than they formerly did in six.

I shall not be surprised to find the number of hours reduced to four. Edwin Chadwick, J. Currie, and other educators, who can speak as having authority, declare that more than four hours in the day can not advantageously be spent in school by children less than eight years of age.

Even in the case of elder children, I should not be inclined to add to the four hours; but I would diminish, and at length dispense with the intervening physical exercises, recesses, etc. Gymnastics and drilling are good, but these can have another time set apart for them; and as soon as the scholar is able to work alone, he should be required to spend at first twenty minutes, and ultimately, perhaps, two hours in the performance of an appointed task, not merely in preparation for recitation, but in writing exercises, and in the reproduction of the oral lessons he receives from his teacher, etc.

To make these oral lessons worth recording, indeed to insure them as being of any value at all, they must be well prepared. Much, if not all the time gained by the teacher will be devoted to this. In Germany or England, a trained teacher (and untrained teachers are not recognized) would no more think of addressing her scholars without preparation, than a lecturer his audience, or a minister his congregation.

II. *Love of knowledge* is a law of childhood. The abuse of this produces idle and impertinent curiosity. It is a simple fact, that the appetite of a child for knowledge is as keen as his appetite for food. If we say we find it otherwise, it is because we give him words when he knows not what they express, signs when he knows not what they symbolize—the husk instead of the kernel; or if, indeed, the kernel is there, he can not get at it through the shell. The maxims laid down by Pestalozzi for the mental training of children are as follows:

"1*st.* Reduce every subject to its elements. One difficulty at a time is enough for the mind of a child, and the measure of information is not what you can give, but what he can receive.

"2*d.* Begin with the senses. Never tell a child what he can discover for himself.

"3*d.* Proceed step by step. Take not the order of the subject, but the order of nature.

"4*th.* Go from the known to the unknown, from the idea to the word, from the signification to the symbol, from the example to the rule, from the simple to the complex."

Formerly we reversed all these rules. Our usual plan of teaching children to read and spell is a good example of their violation. Let us, on the contrary, follow these rules, and we ascend

From *Form* to *Geometry;*
" *Place* to *Geography;*
" *Weight* to *Mechanics;*
" *Size* to *Proportion in Drawing and Architectural Designs;*
" *Number* to *Arithmetic and Algebra;*
" *Color* to *Chromatography;*
" *Plants* to *Botany;*
" *Animals* to *Zoölogy;*
" *Human Body* to *Physiology;*
" *Objects* to *Mineralogy, Chemistry, etc.;*
" *Actions* to *Arts and Manufactures;*
" *Language* to *Grammar.*

With reference to this ascent, Pestalozzi noted,

First, the order in which the faculties are developed with respect to one another; and,

Secondly, the order in which each develops itself with respect to its objects:

1. First, the perceptive Faculty;
   Secondly, the Conceptive Faculty;
   Thirdly, the Reasoning Faculty.
2. In the exercise of the Perceptive faculty, the *perception of likeness precedes the perception of difference,* and *the perception of difference perceptions of order and proportion.*

In the exercise of the Conceptive faculty, *concepts of things physical precede concepts of things imaginary*, and *concepts of things imaginary concepts of things metaphysical.*

In the exercise of the Reasoning faculty, *the power of tracing effect from cause is based, chiefly, on the perception of order; the power of tracing analogies on the perception of likeness; the judgment on the perception of difference.*

III. *Sympathy* is a law of childhood. Pestalozzi argued that *young children can not be governed by appeals to conscience, veneration*, or the love of the beautiful, because in them these sentiments are not yet developed. Still less are they to be governed by the excitements of emulation, as commonly understood, or of fear. True, the principle of emulation exists in the child, and a wise teacher will appeal to it, not with reference to his class-fellows, but to his task. The lesson, and not the schoolmate, is to be overcome. The latter is to be recognized not as an antagonist, but as a fellow-worker. The prize of success is not for *one*, but for *all.*

The principle of fear, too, exists in the child. It is right that he should be afraid to incur the displeasure of his teacher; but the fear of bodily pain merely is the lowest of all motives. It is hardly possible to cultivate the conscience of a child who is brought up under its influence; for, if he do right from fear alone, he will certainly do wrong whenever he judges he has a chance of doing it undetected. This every one knows.

Concerning fear and emulation, as employed by unwise teachers, Pestalozzi wrote, "Moral diseases are not to be counteracted by moral poisons." He maintained that very young children were to be governed by *sympathy;* that the teacher can, and does communicate her own spirit to the scholars. "Do and be," said he, "what you wish your children to do and be." "Work *with* the will, not against it."

Furthermore, he showed that this sympathy, as a motive to action, must be gradually superseded by the *rule of right*, so soon as the children are able to recognize and apply the latter; for all good government tends to self-government—all good education, in childhood, tends to self-education.

May the children of our schools progress from suitable impressions to befitting habits; from good feelings to right principles; from submission to the impulse of fear to obedience to the dictates of conscience; from love of friends to the love of God.

After the reading of the paper on the "Laws of Childhood," the following Address was delivered by Mr. N. A. Calkins, of New York, on

THE HISTORY OF OBJECT TEACHING.

History furnishes no records of attention to elementary education prior to the seventeenth century. The ancients *neglected* the instruction of their children, although they provided schools of philosophy for their young men. The prevailing idea on the subject of education appears to have been that knowledge consisted in the memory of rules and words rather than in things and thoughts. The practice of teaching by requiring the pupils to memorize all lessons, without regard to an understanding of their meaning, had come down from the monastic schools of earlier ages. The principles of development by primary education were then unknown in all the plans of teaching.

Just before the dawn of the seventeenth century, a keen observer of nature and men, having noticed that artisans worked out their results by inductive processes of reasoning, also that the arts and sciences were progressing, while philosophy and education remained stationary, borrowed the principle of utility and progress from the workshops of his time, applied it to philosophy and education, and the world was aroused by the triumphal progress of a new system of philosophy which immortalized the name of Francis Bacon.

This philosopher taught that the powers of memory alone can do but little toward the advancement of science or education. He classed those school achievements in mere memory with the physical achievements of the mountebanks: "The two performances are much of the same sort. The one is an abuse of the powers of the mind; the other is an abuse of the powers of the body. Both may excite our wonder, but neither is entitled to our respect."

Although Bacon's attention was chiefly confined to philosophy, yet he struck the key-note of those great principles of education which have become the foundation of the most philosophical methods of teaching now practiced throughout the civilized world. Said he, "Men read in books what authors say concerning stones, plants, animals, and the like, but to inspect these stones, plants, and animals with their own eyes is far enough from their thoughts; whereas we should fix the eyes of our mind upon things themselves, and thereby form a true conception of them." Little, however, was accomplished during Bacon's time in devising plans for the primary education of children.

Early in the seventeenth century the inductive system of Bacon attracted the attention of a thinking, earnest teacher of Austria—John Amos Comenius. He seems almost to have been endowed with an intuition which gave him, to a remarkable degree, a knowledge of the true principles of education. He saw more clearly than any of his predecessors what was necessary for the improvement of the methods of instruction, and he soon made an application of the principles of Bacon's inductive system to primary education. In 1657 he published the first school-book in which pictures were used to illustrate the various topics discussed in it. This work continued to be a text-book in the German schools for nearly two hundred years.

Comenius was an evangelical preacher as well as an educator, and on the issue of a decree in 1624 that all persons must leave the Austrian dominions who would not become Catholics, he took his departure for Poland with thirty thousand families, of whom five hundred were of noble blood. As he came upon the range of mountains at the boundary, he paused to look once more back to his native land, and, with his brethren, fell upon his knees and prayed, with many tears, that God would not suffer His Word to be entirely destroyed in that country, but would preserve some seed of it there.

Who will say that those prayers were not answered, when, within five years afterward, Comenius was himself permitted to return and labor for the improvement of the schools of Bohemia.

Subsequently he went to Lissa, Poland, where he became president of the school, and bishop of the Moravian brethren—a sect which has been distinguished for its good schools wherever its colonies have been planted. Here he published his first work, the *Janua Linguarum Reserata*—a new method of teaching languages, in connection with instruction in the elements of the sciences. This work soon carried his fame to other lands, and every where it developed the necessity of a reform in education.

By an Act of Parliament Comenius was invited to England in 1641, to undertake the reformation of their schools. His labors there were defeated by the disturbances in Ireland and the civil wars. A similar invitation having been extended to him by the government of Sweden, he left England and went to Stockholm in 1642. War again interrupting his labors, he returned to Lissa. Subsequently he visited Hungary and other places to prosecute his efforts in behalf of education. Again he returned to Lissa, but only to encounter greater misfortunes. Amid the disturbances between the Catholic Poles and the Moravian Protestants, the city was burned, and he lost his house, his library, and his manuscripts, the labors of many years. He subsequently went to Holland, and found an asylum in the city of Amsterdam, where he reproduced several of his lost works. He died in 1671, at the age of eighty.

Comenius was the great educator of the seventeenth century. Such was his enduring earnestness that, although exiled from his native land, wandering, persecuted, and homeless, during the desolating thirty-years' war of that period, still he continued to labor unweariedly in the cause of education, not only inspiring several countries of Europe with an enthusiastic desire for a better system of instruction, but introducing new principles of education, which greatly modified the practices in teaching, and prepared the way, by gradual changes, for the more thorough reformation of schools which followed under the labors of subsequent educators.

In his educational works may be found the first promulgation of the principles and plans of Object Teaching, and of a graduated system of instruction adapted to the wants of the age in which he lived.

Some of his leading ideas on the subject of education we will briefly state: "Since the beginning of knowledge must be with the senses, the beginning of teaching should be made by dealing with actual things. The object must be a real, useful thing, capable of making an impression upon the senses. To this end it must be brought into communication with them; if visible, with the eyes; if audible, with the ears; if tangible, with the touch; if odorous, with the nose; if sapid, with the taste. First the presentation of the thing itself, and the real intuition of it; then the oral explanation for the farther elucidation of it."

But inasmuch as the presentation of the thing itself is so frequently impossible, he advised the use of pictures as the representatives of things, that the words which related to them might be understood.

The course of instruction laid down by Comenius commenced with infancy. During the first six years the children were to learn to know animals, plants, stones, and the names and uses of the members of their own body. They were also to be led to distinguish colors, and to delight their eyes with beautiful things. They should begin Geography with the knowledge of the room, the streets, the fields, the farm—Arithmetic, with counting objects—Geometry, with understanding the ideas of lines, circles, angles, length, breadth, an inch, a foot, etc.—Music, with hearing singing—History, with a knowledge of what happened to them yesterday and the day before—Chronology, with the knowledge of day and night, hours, weeks, and festivals.

The views of Comenius are so completely in harmony with the natural means of acquiring knowledge through the exercise of the senses, and with the laws of mental development, and also with the observations and experiences of many succeeding educators, that we deem the presentation of a few of his thoughts, in language more literally his own, due even in this brief history of Object Teaching. For the following extracts from his writings we are indebted to that most valuable of all collections of educational literature, *Barnard's American Journal of Education.*

Said Comenius: "The best years of my own youth were wasted in useless school exercises. How often, since I have learned to know better, have I shed tears at the remembrance of lost hours. But grief is vain. Only one thing remains; only one thing is possible—to leave posterity what advice I can by showing the way in which our teachers have led us into errors, and the method of remedying these errors."

His practical views of education may be discerned in the succeeding quotations:

"Instruction will usually succeed if it follows the course of Nature. Whatever is natural goes forward of itself."

"The first education should be of the perceptions, then of the memory, then of the understanding, then of the judgment."

"Instruction must begin with actual inspection, not with verbal description of things."

"To learn is to proceed from something known to the knowledge of something unknown; in which there are three things, the known, the unknown, and the mental effort to reach the unknown from the known."

"We first proceed toward knowledge by the perception and understanding of the present; and afterward go on from the present to the absent by means of the information of others."

"The attention should be fixed upon only one object at a time; and upon the whole first, and the parts afterward."

"A second point should not be undertaken until the first is learned; and with the second, the first should be repeated."

"Sight will supply the place of demonstration. It is good to use several senses in understanding one thing."

"To know any thing is to be able to represent it, either by the mind, or the hand, or the tongue. We learn, not only in order to understand, but also to *express* and to *use* what we understand. As much as any one understands, so much ought he to accustom himself to express; and, on the other hand, he should understand whatever he says. Speech and knowledge should proceed with equal steps."

"Hitherto the schools have done nothing with the view of developing children, like young trees, from the growing impulse of their own roots, but only with that of hanging them over with twigs broken off elsewhere. They teach youth to adorn themselves with others' feathers, like the crow in Æsop's Fables. They do not show them things as they are, but tell them what one and another, and a third, and a tenth has thought and written about them; so that it is considered a mark of great wisdom for a man to know a great many opinions which contradict each other."

"The schools are wrong in first teaching language and then proceeding to things. The thing is the substance, and the word the accident; the thing is the body, and the word the clothing. Things and words should be studied together, but things especially, as the objects both of the understanding and of language."

"In God are the original ideas, which He impresses upon things; things, again, impress their representations upon the senses; the senses impart them to the mind; the mind to the tongue, and the tongue to the ears of others. The mind thinks —the tongue speaks—the hand makes; hence the arts of speaking and working, and the sciences of things."

Such are a few of the principles in education which Comenius taught—and they have since been confirmed by the experiences of two centuries.

It is difficult to judge to what extent the later educators—Lock, Rousseau, and Pestalozzi—were indebted to Comenius for those principles which they severally taught subsequently, but we find much in the writings of each that is entirely in accordance with the teachings of this great pioneer in educational reforms. It is not too much to say that a careful study of the history of education would result in the conviction that many of the best methods of instruction, and the principles of education on which are based so great a number of the modern improvements in modes of teaching, were conceived and taught by Comenius more than two hundred years ago. He planted the seeds which have germinated from time to time, under the fostering care of various educators, and to-day we behold their most vigorous growth.

The labors of Comenius were performed during the first two thirds of the seventeenth century. John Locke, the distinguished English philosopher, lived during the last two thirds of that century. He urged, as the chief business of primary education, the development of the faculties of the child; that as the first ideas of children are derived from sensation, so the perceptive faculties should be the first cultivated or developed. The main elements of his methods of education were attention to the physical wants of the child, and the development of the intellectual powers through the instrumentality of things.

Rousseau, who acknowledged his indebtedness to Locke, and who embodied ideas similar to those of that philosopher in a treatise on education called "Emile," lived during nearly three fourths of the eighteenth century.

Pestalozzi was born about the middle of the eighteenth, and died soon after the close of the first quarter of the nineteenth century. He said: "Observation is the absolute basis of all knowledge. The *first* object then, in education, must be to lead a child to *observe* with accuracy; the second, to *express with correctness* the result of his observations." "The development of man commences with natural perceptions through the senses. Its highest attainment, intellectually, is the exercise of reason." Although we find no direct acknowledgment of Pestalozzi's indebtedness to Comenius, as we do of the relation of the latter to Bacon, no one can examine the systems of these educators of the seventeenth and nineteenth centuries without discovering many remarkable similarities. It was doubtless owing to the general diffusion of the *principles* so widely taught by Comenius that the *methods* for applying them, which were subsequently devised by Pestalozzi, became at once so popular and widely successful.

The dawn of the present century beheld Pestalozzi at Bourgdorf, engaged with Krüsi in making a more detailed application of those principles of education which were disseminated by Comenius a century and a half before, in methods chiefly devised by himself. While there, Pestalozzi wrote that work—"How Gertrude teaches her Children"—which attracted so much attention to his system of education from all parts of Europe.

As early as 1807 we find him in charge of the institution at Yverdun, where he attained his highest renown, and where he remained for nearly a quarter of a century. So widely had his fame extended, that persons went thither from almost every country of Europe, and even from America; not merely those who were led by the impulses which inspired him, but by the agents of kings and noblemen, and of public institutions, who desired to make themselves acquainted with his methods of teaching, in order to their introduction into other countries. No similar institution has ever attained so great fame, and no other has exerted so wide an influence on the methods of teaching.

Just before Pestalozzi opened his institution at Yverdun, he received a request from a philanthropic society in Paris to send a teacher there who could introduce his system of instruction into France. Accordingly, he selected Mr. Joseph Neef, who had been associated with him as a teacher, and who possessed the additional qualifications of understanding both the German and French languages. Mr. Neef went to Paris, and remained some two years, laboring with a good degree of success.

During the summer of 1805, Mr. William Mac Clure, of Philadelphia, while traveling in Switzerland, visited Pestalozzi's school, and was so much pleased with the system of teaching that he resolved to introduce it into America. On returning to Paris he sought out Mr. Neef, and invited him to come to this country.

"On what terms," said Mr. Mac Clure, "would you go to my country and introduce your method of education? I have seen Pestalozzi; I know his system; my country wants it, and will receive it with enthusiasm. I will engage to pay your passage, also to secure your livelihood. Go, and be your master's apostle in the New World."

So generous an invitation awakened an earnest desire in Mr. Neef to visit this country. He would fain have accepted it, but he did not know our language. "Two years shall be allowed you for acquiring that language, during which time I will support you," said this noble benefactor. This generous proposition decided the mission. Mr. Neef came to Philadelphia, studied the language, and in 1809 published a small volume setting forth, somewhat in the style of an extended prospectus, the plans and principles of a new method of education which he proposed to introduce into a private school that he should establish in the suburbs of that city. He labored there for several years, but from some cause, probably owing to his inability to adapt himself to the American mind and habits, his enterprise failed. Judging from a second volume which he issued in 1813, on language, he must have been not only impractical, but also have failed to comprehend the necessity of Americanizing the system instead of merely transplanting it.

He probably sought—to quote his own words, uttered in view of the fate which might attend his school—"some obscure village whose hardy youth want a schoolmaster;" for, said he, "to become an obscure, useful country schoolmaster is the highest pitch of my worldly ambition."

Although Pestalozzi founded his system on correct principles, he frequently erred in his practice of teaching. Many of his expedients for Object Teaching were faulty, and not even in accordance with his own system. In his zeal for the improvement of the mind itself, and for methods of instruction which were calculated to invigorate its faculties, he forgot the necessity of positive knowledge as the materials for thought and practical use in future life. So frequently did he violate his own system in the exercises of the school-room, that one of his intimate friends and admirers said of him, "His province is to educate ideas, not children." Nevertheless, he succeeded in reviving the true principles of teaching, and instituting the greatest educational movement of the century. He had the good fortune to associate with him Neiderer, Krüsi, Schmid, Zeller, and Fellenberg, to whose systematic development of his methods, and their dissemination of them, the subsequent success of his system is largely due. Many of his teachers even resigned to him whatever of fame and profit might come from publishing the manuals which they compiled for their respective branches of study while engaged as instructers in his institution.

During the subjugation of Germany under Napoleon, the minds of the ablest Prussian statesmen were eagerly occupied in devising means for raising the moral, mental, and physical character of the nation to a standard of elevated development, which, although it might be of little immediate use in their struggle for independence, yet might insure the success of such a struggle in the future. Among the prominent instrumentalities sought for this purpose was an improvement in their schools, by the introduction of the Pestalozzian system of teaching. The king, the queen, and the ministry looked upon this movement with hopes of the happiest results. Accordingly, extensive measures were at once taken to test these plans.

Carl August Zeller, who had been one of Pestalozzi's teachers at Bourgdorf, also at Yverdun, was engaged by the government of Prussia to organize normal schools for training teachers in this system of instruction. In addition to this means, several young men were sent to Yverdun, also to other similar institutions, to acquire the best methods of teaching. Thus, in a comparatively short time, a large body of competent instructors were scattered among the Prussian schools.

Introduced as the system thus was under the most favorable auspices, yet with some modifications, its spirit proved satisfactory in meeting the needs of the people for a more thorough intellectual development of the nation. This introduction was commenced about 1810, and in 1825 it had possession of the entire common school system of that country.

From Prussia and the German states the system of Pestalozzi has been widely diffused in other countries by visitors who went there for the purpose of examining the workings of their schools. It was partially transferred to France by Cousin and Jullien. The principles of this system now prevail in the best schools of England, Denmark, Switzerland, Prussia, Germany, Sardinia, Greece, and many of the colonies of Great Britain. The methods of teaching which prevail in the United States have been materially influenced by the promulgation of these principles.

Some thirty years ago efforts were made in Boston, and other portions of New England, to introduce the system of Pestalozzi into their schools by Prof. William Russell, William C. Woodbridge, Carter, Gallaudet, Alcott, and Dr. Griscom. Able articles were published on this subject by Prof. Russell, in the "*Journal of Education*," as long ago as 1829. In 1830 and '31, William C. Woodbridge wrote a series of articles for the "*Annals of Education*," describing the principles of teaching in the institution of Fellenberg, at Hofwyl, where improved methods of Pestalozzi's system were practiced. These articles treated chiefly upon the principles of the system, without giving details of the methods. Notwithstanding the diffusion of the principles of *Object Teaching* in this country during that period, its practice *died out through the want of teachers trained in the system and its methods.*

The institution of Pestalozzi, at Yverdun, was visited in 1818 by Dr. Mayo, of London, and about the same period by Dr. Biber and Mr. Greaves. Through the efforts of these gentlemen the system taught there was introduced into England. The success of this introduction was secured through the organization, in 1836, of the "Home and Colonial School Society," and the subsequent establishment of Training and Model Schools in London, for instructing teachers in its principles and methods.

In this introduction of the system of Object Teaching into England, it was found necessary to greatly modify the plans of instruction to adapt them to the Anglo-Saxon mind and character.

In the schools of this society the system of elementary instruction by object lessons has been brought to a much greater degree of perfection than it attained even under the immediate supervision of the celebrated Swiss educator.

The Training Institution of London usually has about two hundred student teachers in attendance; and about one hundred graduate annually. Up to the present time some 3000 teachers have been trained there, and by them the methods of Object Teaching are gradually being diffused throughout England.

Something has been done toward introducing the plans of Object Teaching into the best schools of Canada. Visitors from the United States to the celebrated Normal and Model Schools of Toronto have caught glimpses of the system from time to time, and brought away many suggestions for improvements in their own methods of teaching.

About [illegible] years since, one who had long been dissatisfied with the results of the usual methods of elementary instruction, and who had been endeavoring to devise some more common-sense methods for primary schools than those which consisted of mere memory of words, while visiting the Model School of Toronto, found the books published by the Home and Colonial Society on elementary instruction. He procured these, together with pictures and other apparatus for illustrating the lessons, and, returning to the schools under his supervision, prepared his programmes, called his teachers together, gave them instructions, and commenced in earnest the introduction of Object Teaching into all the primary schools under his charge.

Many were the difficulties encountered. The methods of teaching were new alike to superintendent, teachers, and pupils. No one was at hand, familiar with the system, to give instruction either in its principles or methods. As a substitute for this, and the guidance of one trained in the practice of Object Teaching, once during each week teachers and superintendent met to compare notes of lessons and notes of progress. The oldest teachers, as well as the youngest, studied in preparation for the work before them.

The teachers became more and more interested in the system as they saw its results in their pupils. The interest of the pupils grew stronger as the teachers learned to practice the system better. Such were the efforts for the first systematic introduction of Object Teaching into the United States; and the honor of this achievement is due to the city of Oswego, her earnest superintendent, E. A. Sheldon, Esq., and her progressive Board of Education.

During the regular annual examinations for promotions, about one year ago, the subject of Object Lessons was added to the list of studies in which examinations were to be made. It was my pleasure to be present for several days, and witness the exercises. Notes from parents requesting that Henry, William, and Mary might be allowed to remain in the primary school another term, "they are so much interested in their Object Lessons," told in unmistakable language of its appreciation by the parents. They found their children becoming unusually interested in school, and more attentive and observing at home; and their hearts were gladdened in view of the changes that were being wrought in their boys and girls.

My own gratification has since been repeatedly expressed in words similar to the following: "To any one who may desire to see the practical operations of Object Teaching, and the best system of elementary instruction to be found in this country, let me say, make a visit to Oswego."

It was at length discovered that to meet the wants of their schools, and secure the complete introduction and continued practice of the system, a Training School was needed. Accordingly, application was made to the "Home and Colonial School Society" of London for a training teacher. They responded by sending Miss M. E. M. Jones, who arrived here on the first of May last, and immediately entered upon her duties.

In response to an announcement that a few teachers would be admitted in the class besides those engaged in the public schools of Oswego, a dozen other ladies assembled there on the 6th of August last. Others were subsequently admitted. Several members of this training class have already left to engage in teaching.

Rooms have been fitted up in the New York State Normal School at Albany for a Model School in Object Teaching, where the future graduates from that institution will be instructed in this system. This Model Department will be under the charge of a lady who was trained in the class at Oswego.

The Board of Trustees of the New Jersey State Normal School, appreciating the advantages of the system, sent a lady teacher to attend this training class, and defrayed her expenses, to prepare herself for introducing it into their school at Trenton.

Some of the practices of Object Teaching have been introduced into the Normal School at Ypsilanti, Mich., by the principal of that institution.

Already several cities and many towns are taking steps preparatory to its introduction, and some have been practicing its lessons for several months. Among those thus actively interested, we may mention Syracuse, New York, Paterson, N. J., Chicago, Ill., Toledo and Cincinnati, Ohio, Rochester, N. Y., San Francisco, and might add a large number of smaller places.*

The great interest manifested in this system of instruction is shown by the numerous articles on the subject which appear in the educational journals of the country, and in the repeated and numerous inquiries relative to its plans. Amid this general interest in the system, and the popular excitement concerning it, there is great danger that the well-meaning, but *not* well-informed, may make fatal mistakes in attempting to practice it. Object Teaching is based on philosophical principles, and the teacher must know what those principles are before she can apply its methods successfully. The true system of teaching takes Nature for its guide; its dangers lie in the want of observation and conformity to the relations of knowledge and the laws of mental development.

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* Note.—The author of this Address has omitted to state some facts, of a personal nature, which are important to an accurate history of the present movement in primary education in this country.

In the summer of 1860, Mr. Calkins commenced the active preparation of a work on "Object Lessons," which was published in July, 1861. Within six months from its first presentation to the public it had reached its fourth edition, and it is used wherever there is any interest in Object Teaching. In addition to this, and in response to numerous invitations from Teachers' Institutes and Teachers' Associations, he has delivered lectures on this subject in various parts of the states of New York, New Jersey, Connecticut, and in Massachusetts. Of his labors in the State of New York, the State Superintendent remarks in his last Annual Report:

"A large number of school commissioners, having interested themselves in the subject, secured the services of N. A. Calkins, Esq.—a gentleman who has given the system much attention and study—who visited and conducted quite a number of institutes, lecturing upon the principles, and giving instruction in the practice of 'Object Teaching.' In this way the attention of many hundreds of our teachers has been directed to definite aims in the elevation of the character of the educational work."—*Board of Education*, Oswego.

During the time of Pestalozzi, Yverdun was the fountain from whence the teachers of Europe and America sought a new and better system of education. When, subsequently, the Prussian schools had been modified by the methods employed at Yverdun, educators journeyed thither to observe and to learn.

To-day educators and teachers from several states, and from various parts of our own state, have come up to Oswego to see with their own eyes what they have heard with their ears of the schools, and the system of instruction pursued here. Their hearts have been made glad by what has already been witnessed, and their longings for some sound philosophical improvement, for some means whereby more satisfactory and practical results in elementary education may be attained, has been gratified by the hope that the glorious day has already dawned on our shores when the *philosophy of Bacon, the principles of Comenius, the system of Pestalozzi, and the most practical methods of Object Teaching* shall be thoroughly incorporated into the system of instruction in all the schools of our country.

THE CLOSING EXERCISES OF THE CONVENTION

were held in Doolittle Hall, at 7½ o'clock on Thursday evening. After the reading of the Report of the Committee by Professor Phelps, the following resolutions were offered by E. B. Talcott, Esq., in behalf of the Board of Education, and were unanimously adopted by the audience.

Resolved, That the gentlemen and ladies who have visited this city on the invitation of the Board of Education, for the purpose of witnessing the practical operation of what is known as the Pestalozzian system of education, as now taught in our primary schools, coming as they do from different and remote parts of the Union, have evinced an interest in the educational progress of the country which entitles them to the gratitude of our citizens, and of all who feel interested in the prosperity of the schools of the country, and in the general adoption of the best and most efficient system of teaching in its primary schools.

Resolved, That this meeting tender its cordial thanks to Miss M. E. M. Jones and to N. A. Calkins, Esq., for their able, interesting, and instructive papers read in this hall on Tuesday evening last.

S. B. Woolworth, LL.D., Secretary of the Board of Regents, submitted, in behalf of the Committee of Examination, a resolution complimentary to the City Superintendent, E. A. Sheldon, to the Board of Education, and the citizens of Oswego, who encouraged and sustained these officers by a liberal public sentiment, which had enabled them to be so successful in their labors for the improvement of their public schools.

Dr. Woolworth spoke at some length on the subject of education, and in commendation of the schools of Oswego. He said that the looks of intelligence, and the expressions of happiness among the children, had been to him a source of great gratification. He believed that their education has been properly commenced.

Hon. David N. Camp, State Superintendent of Schools in Connecticut, was called to speak as a representative from New England. He remarked that the schools of the Eastern States were introduced with the log cabins, and were regarded by the people as necessary to the existence of free institutions. New England, he remarked, was deeply interested in common schools, and all improvements of the means of education. There the children of every nationality were freely taught, as education is regarded as the true foundation of virtue, freedom, and righteousness. He had visited schools in all of the Eastern States, also in the principal cities from Maine to Missouri. He had also visited the schools in Canada, and in all he had sought for something good to take back to his own state; but he added, "During all of these visits, I have never found the principles of education so simplified and systematized—crystallized, as it were—as in the schools of the city of Oswego. I came here to learn, and I shall go back to New England and tell with gladness what my eyes have seen and my ears heard."

Remarks were made by Rev. Dr. Ludlow, of Oswego, and others, and the Convention adjourned.

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